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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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Michael Wagner

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EXAMINER

CUMBERLEDGE, JERRY L

ART UNIT

PAPER NUMBER

3733

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/805,623	Applicant(s) WAGNER ET AL.	
	Examiner JERRY CUMBERLEDGE	Art Unit 3733	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 August 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-176 is/are pending in the application.
- 4a) Of the above claim(s) 53-65 and 164-176 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-52 and 66-163 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Arguments

Applicant's arguments (see Appeal Brief, filed 08/21/2008, page 9) have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of Bono (US Pat. 5,954,722).

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-22, 24-48, 50-52, 66-82, 84-113, 115-139, 141-160, 162 and 163 are rejected under 35 U.S.C. 102(e) as being anticipated by Bono (US Pat. 5,954,722).

Bono discloses a bone plate having a longitudinal axis (Fig. 2, ref. 17) and comprising: an upper surface (Fig. 2); a lower surface (Fig. 2); at least one first type of hole (Fig. 2, one ref. 16)(e.g. Fig. 5, left), the first type of hole being elongated and extending through the upper and lower surfaces (Fig. 2), and having a central axis and a longitudinal axis (Fig. 2), wherein the first type of hole includes a threaded portion (Fig. 4, ref. 28)(Fig. 2) and a non-threaded portion (Fig. 4, ref. 46), and the threaded portion extends through an angle of between about 190° and about 280° with respect to the central axis (Fig. 4); and at least a second type of hole (Fig. 2, another ref.

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16)(column 5, lines 6-22, *i.e.* bushing placed at different angle within hole yielding different type of hole) extending through the upper and lower surfaces (Fig. 2), the second type of hole including an internal thread configured and dimensioned for engaging a threaded portion of a screw head (Fig. 3)(Fig. 2). The plate comprises a plurality of holes of the first type and a plurality of holes of the second type (Fig. 2). The plurality of holes of the first type are located closer to a first end of the plate and the plurality of holes of the second type are located closer to a second end of the plate (Fig. 2). The longitudinal axis of at least one of the first type of hole is substantially aligned with the longitudinal axis of the plate (Fig. 2, *i.e.* diameter which is parallel with long axis of plate). The second type of hole has an outer perimeter that is substantially circular (Fig. 2). The second type of hole is conically tapered inward from the upper surface towards the lower surface of the plate (Fig. 3, taper created from threads of ref. 16). The second type of hole conically tapers at a cone angle of between about 5° and about 20° (column 4, lines 60-67). The bone plate comprises at least a third type of hole extending through the upper and lower surfaces, wherein the third type of hole is substantially non-threaded (Fig. 2, middle holes in plate). A plurality of holes of the first type and at least one hole of the second type or third type is located closer to a first end of the plate and a plurality of holes of at least the second type are located closer to a second end of the plate (Fig. 2). The second type of hole has a first opening on the upper surface of the bone plate and a second opening on the bottom surface of the bone plate, and the first and second openings have substantially the same dimensions (Fig. 2)(Fig. 5). The threaded portion of the first type of hole extends through an angle of between about

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200° and about 250° with respect to the central axis (Fig. 2, ref. 16). The threaded portions of the hole extend through multiple angles (e.g. Fig. 4, 0-approximately 345 degrees). The first angle is between about 200° and about 270°, and the second angle is between about 180° and about 230° (Fig. 4). The first type of hole has first and second ends spaced apart along the longitudinal axis, and the threaded portion is disposed adjacent one of the ends (Fig. 2). The threaded portion of the first type of hole is located closer to a central portion of the bone plate than to an end portion of the bone plate (Fig. 2, e.g. rightmost holes). The non-threaded portion of the first type of hole is configured and dimensioned to engage a substantially spherical screw head and provide compression of fractured bone fragments (Fig. 2). The bone plate includes a screw (Fig. 7, ref. 218) having a head (Fig. 7, ref. 222), wherein the screw head is substantially smooth (Fig. 7). The bone plate further includes a screw (Fig. 5, ref. 18) having a head, wherein the screw head is at least partially threaded (Fig. 5, ref. 62). The non-threaded portion of the first type of hole includes a concave recessed portion in the upper surface (Fig. 2, near ref. 14). The recessed portion is substantially spherical (Fig. 2)(Fig. 5). The threaded portion of the first type of hole tapers inward in a direction from the upper surface towards the lower surface (Fig. 2, ref. 72 and 39). At least a portion of the non-threaded portion of the first type of hole tapers inward from the upper surface to the lower surface to form at least one ramp surface for engagement with a screw head (Fig. 5). The ramp surface is located on one end of the first type of hole to provide compression in a single direction (Fig. 5).

Bono discloses a bone plate (Fig. 2, ref. 17) having a longitudinal axis (Fig. 2)

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and comprising: an upper surface (Fig. 2); a lower surface (Fig. 2); at least one first type of hole (Fig. 2, one ref. 16)(e.g. Fig. 5, left), the first type of hole being elongated and extending through the upper and lower surfaces (Fig. 2), and having a central axis (Fig. 2) and a longitudinal axis (Fig. 2), wherein the first type of hole includes a threaded portion (Fig. 4, ref. 28)(Fig. 2) and a non-threaded portion (Fig. 4, ref. 46), and the threaded portion extends through an angle of between about 190° and about 280° with respect to the central axis (Fig. 4); and at least a second type of hole extending through the upper and lower surfaces (Fig. 2, holes in middle of plate), wherein the second type of hole is substantially non-threaded (Fig. 2).

Bono discloses a bone plate (Fig. 2, ref. 17) having a longitudinal axis (Fig. 2) and comprising: an upper surface (Fig. 2); a lower surface (Fig. 2); at least one first type of hole extending through the upper and lower surfaces (Fig. 2, holes in middle of plate), and having a first central axis (Fig. 2) and being elongated in a direction substantially aligned with the longitudinal axis (Fig. 2), wherein the first type of hole is non-threaded and has an outer perimeter (Fig. 2), at least a portion of the outer perimeter tapering inward from the upper surface to the lower surface to form at least one ramp surface for engagement with a first screw head (Fig. 2, indicated by dashed lines); and at least a second type of elongated hole extending through the upper and lower surfaces (Fig. 2, one ref. 16)(e.g. Fig. 5, left), the second type of hole having a second central axis (Fig. 2) and a longitudinal axis (Fig. 2), wherein the second type of hole includes a threaded portion (Fig. 4, near ref. 28) and a non-threaded portion (Fig. 5, ref. 46), and the

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threaded portion extends through an angle of between about 190° and about 280° with respect to the second central axis (Fig. 4).

Bono discloses a bone plate (Fig. 2, ref. 17) having a longitudinal axis (Fig. 2) and comprising: an upper surface (Fig. 2); a lower surface (Fig. 2); and at least one first type of hole (Fig. 2, one ref. 16)(e.g. Fig. 5, left), the first type of hole being elongated and extending through the upper and lower surfaces (Fig. 2), and having a central axis a longitudinal axis (Fig. 2), wherein the first type of hole is at least partially threaded (Fig. 2)(Fig. 3) and the threaded portion of the hole tapers inward with respect to the central axis (Fig. 3, ref. 72 and 39); and at least a second type of hole extending through the upper and lower surfaces (Fig. 2, another ref. 16)(column 5, lines 6-22, *i.e.* bushing placed at different angle within hole yielding different type of hole), the second type of hole including an internal thread configured and dimensioned for engaging a threaded portion of a screw head (Fig. 2)(Fig. 3).

Bono discloses a bone plate (Fig. 2, ref. 17) having a longitudinal axis (Fig. 2) and comprising: an upper surface (Fig. 2); a lower surface (Fig. 2); and at least one first type of hole (Fig. 2, one ref. 16)(e.g. Fig. 5, left), the first type of hole being elongated and extending through the upper and lower surfaces (Fig. 2), and having a central axis (Fig. 2) and a longitudinal axis (Fig. 2), wherein the first type of hole is at least partially threaded and the threaded portion of the hole tapers inward with respect to the central axis (Fig. 3, ref. 72 and 39); and at least a second type of hole extending through the upper and lower surfaces (Fig. 2, middle holes of plate), wherein the second type of hole is substantially non-threaded (Fig. 2).

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Bono discloses a bone plate(Fig. 2, ref. 17) having a longitudinal axis (Fig. 2) and comprising: an upper surface (Fig. 2); a lower surface (Fig. 2); at least one first type of hole (Fig. 2, middle holes of plate) extending through the upper and lower surfaces (Fig. 2), and having a first central axis (Fig. 2) and being elongated in a direction substantially aligned with the longitudinal axis (Fig. 2), wherein the first hole is non-threaded and has an outer perimeter (Fig. 2), at least a portion of the outer perimeter tapering inward from the upper surface to the lower surface to form at least one ramp surface for engagement with a first screw head (Fig. 2, indicated by dashed lines); and at least a second type of elongated hole (Fig. 2, one ref. 16)(e.g. Fig. 5, left) extending through the upper and lower surfaces (Fig. 2), the second type of hole having a second central axis (Fig. 2) and a longitudinal axis (Fig. 2), wherein the hole is at least partially threaded (Fig. 2)(Fig. 3)and the threaded portion of the hole tapers inward with respect to the second central axis (Fig. 3, ref. 72 and 39).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 23, 49, 83, 114, 140 and 161 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bono (US Pat. 5,954,722) in view of Allgower et al. (US Pat. 3,668,972).

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Bono discloses the claimed invention except for a hole having a first dimension on the lower surface that is substantially parallel to the longitudinal axis; the hole having a second dimension on the lower surface that is substantially perpendicular to the longitudinal axis; and the first dimension is between 1.1 and 3 times larger than the second dimension.

Allgower et al. discloses a bone plate that comprises a hole with two different dimensions along the bottom surface (Fig. 4, ref. 5), which is useful in allowing the bone plate to provide compression between two bone fragments (abstract).

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to have constructed a hole of Bono with two different dimensions along the bottom surface in order to allow the bone plate to provide compression between two bone fragments (abstract).

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Please see attached PTO-892.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JERRY CUMBERLEDGE whose telephone number is (571)272-2289. The examiner can normally be reached on Monday - Friday, 8:30 AM - 5:00 PM.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Eduardo Robert can be reached on (571) 272-4719. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/J. C./

Examiner, Art Unit 3733

/Eduardo C. Robert/

Supervisory Patent Examiner, Art Unit 3733